

CELSIUS® M450

Get more power

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CELSIUS workstations feature the very latest technology and system components to deliver high-end performance. They are the ideal choice for business segments like computer aided design and engineering, mechanical design, simulation, virtual reality, visualization, digital content creation, and finance. CELSIUS workstations are certified for a broad variety of software applications. The ISV certification process enables workstation users to run their preferred applications with the best possible performance and maximum system stability.

If you need more power and more expandability than an entry-level workstation can offer, opt for the mid-range workstation CELSIUS M450.

Performance

- Latest Intel® Core™2 Duo Processor, Intel® Pentium® D Processor or single core Pentium 4 Processor
- Ready for 64-bit computing
- Up to 8.0 GB DDR2-SDRAM for memory demanding applications
- PCI Express x16 enabling the most powerful graphics subsystems
- Optional SAS controller with 10k or 15k rpm hard disk drives for high speed storage access
- RAID (0) support for SATA and SAS for high speed storage

Reliability

- Certification of all relevant workstation applications to ensure ISV support
- Reliability enhancing features, like ECC memory and RAID (1, 5 and 10) for mission critical applications
- Developed and manufactured in Germany guaranteeing high quality, reliability and stability
- Individually tailored warranty, service, and spare part programs
- Choice of supply programs to meet both fast and tailored delivery needs

Manageability

- DeskView software suite for easy integration into existing IT environments
- Easy and remote administration with DeskView client management

Security

- Extensive built-in and optional security features providing
 - protection for business critical data
 - protection against physical tampering and theft
- SmartCard reader optionally available

Ergonomics

- Lowest possible noise emission via optimized cooling
- Convenient front access to USB, audio, and FireWire
- Tuned graphics driver for best image quality and performance
- Reduced downtime with service-friendly cabinet and easy component access (EasyChange and FlexySlot)
- Optional medical kit for healthcare environments

Environment

- Design guidelines for eco-friendly products in respect to material and recycling
- Environmentally friendly product and ISO14001 certified manufacturing:
 - no dangerous waste during production
 - lead-free printed circuit board (PCB) and soldering process
 - significant reduction of lead and halogens to a minimum



System		CELSIUS M450
Operating Systems	Windows XP Professional	Opt. preinstalled
	Windows XP Professional x64 Edition ⁽⁴⁾	Opt. preinstalled
	Windows Vista® Business 64-bit ⁽⁴⁾	Tested
	Windows Vista® Business 32-bit ⁽⁴⁾	Opt. preinstalled
Mainboard	Linux	RedHat / Novell certification
	Microprocessor (SLC, FSB)	D2438 Intel® Core® 2 Duo Processor E4300 (2MB, 800), E6300, E6400 (2 MB, 1066), E6600, E6700 (4 MB, 1066); Intel® Pentium® D Processor 925, 945 (2 x 2 MB, 800); Intel® Pentium® 4 Processor 651 (2 MB, 800)
	Chipset	Intel® 975X Express
	Slots / Bays	7 (max. 312 mm), 1 x PCI Express x16, 1 x PCI Express x4 (mech. x16), 1 x PCI Express x1, 4 x PCI 32-bit / 33 MHz
Memory	Amount ⁽¹⁾ and type DIMM slots	Max. 8 GB, DDR2-533 SDRAM, ECC, DDR2-667 SDRAM, ECC or non ECC 4
Interfaces	Serial	1 x 9 pin, RS232
	Parallel	1 x 25 pin, EPP and ECP
	Keyboard, mouse	2 x PS/2
	USB 2.0	2 x front, 4 x rear
	LAN	1 x RJ-45
	IEEE 1394	1 x front, 1 x rear
	Front Audio	1 x headphone out, 1 x mic in
	Rear Audio	1 x line in, 1 x line out, 1 x mic in, 1 x S/PDIF
	Speaker	Internal
	Fast IDE/ Ultra DMA-100 Serial ATA Interfaces	On board for 1 x 2 drives On board for 4 HDDs, RAID 0 / 1 / 5 / 10; On board for 1 x 2 ODD
I/O controller	SAS-Controller	Opt.: LSI-3041E, Host RAID 0 / 1 support, 4 internal connectors
	LAN	Broadcom BCM 5751, 10/100/1000 Mbit/s, ASF 2.0
	Wireless LAN	Opt. (not supported with LINUX)
Graphics	Audio	Realtek ALC 260, HD audio
	Ultra-high-end 3D:	NVIDIA Quadro FX 5500, 1024 MB, PCIe x16, stereo, 2 x DL DVI-I;
	High-end 3D:	NVIDIA Quadro FX 4600, 768 MB, PCIe x16, stereo, 2 x DL DVI-I ATI FireGL V7300, 512 MB, PCIe x16, stereo, 2 x DL DVI-I;
	Midrange 3D:	NVIDIA Quadro FX 3500, 256 MB, PCIe x16, stereo, 2 x DL DVI-I NVIDIA Quadro FX 1500, 256 MB, PCIe x16, 2 x DL DVI-I, HDTV-out;
	Entry 3D:	ATI Fire GL V5200, 256 MB, PCIe x16, 2 x DL DVI-I NVIDIA Quadro FX550, 128 MB, PCIe x16, 2 x SL DVI-I
	Multi monitor 2D:	NVIDIA Quadro NVS 285, 128 MB, PCIe x16, 2 x SL DVI-I;
Drives	Floppy disk	Opt. 3.5 inch, 1.44 MB
	Hard disk ⁽²⁾	SATA-II 80, 160, 250, 500 GB, 7200 rpm; SATA-II 80, 160 GB, 10000 rpm; SAS 73, 146, 300 GB, 10000 / 15000 rpm
	Optical	ATAPI DVD 16/48; ATAPI CD RW / DVD combo 48/32/48/16; ATAPI SuperMulti DVD±R/±RW/RAM DL 2.4/5/4/8/8/10/16/10/24/32/40/16/40/48
Chassis	External drive bay	3 x 5.25 inch
	Internal drive bay	4 x 3.5 inch (HDD)
Electrical	Power supply	410 W, 100 - 240 V, 50 - 60 Hz
	Typical power consumption	150 W, depending on configuration
Ambience	Ambient temperature	15-35° C according to IEC 721
	Relative humidity	20-80% according to IEC 721
	Noise emission values	23 dB idle mode, 23 dB full operation mode; according to ISO 9296 (LpAm at bystander position); depending on configuration
	Dimensions (H x W x D)	446 x 215 x 520 mm
	Weight	Approx. 20 kg, depending on configuration
Standards	Product safety	IEC60950, UL60950, CSA C22.2 No. 60950
	Ergonomics	GS EK1-ITB2001
	Electromagnetic compatibility	EN55022 / CISPR22, EN55024 / CISPR24, EN61000-3-2/-3, CSA C108.8, IEC60601-1-2 ⁽³⁾ , FCC class B
Security	CE mark	89/336/EEC (EMI), 73/23/EEC (product safety)
	Cabinet security features	Seal option, anti-theft function, Kensington Lock support, intrusion detection, SmartCard reader optional
	BIOS security features	Write protect for EEPROM, boot protection, system and setup password, password and disabling functions for many system components
	Component security features	S.M.A.R.T. SATA HDD
Manageability ⁽⁴⁾	Software	Opt. SmartCase™ Logon+
	DeskView 10.x	Client management
Accessories	Drivers and Utility DVD ⁽⁴⁾	Manuals, drivers and utilities, DeskView, Norton Internet Security
	DU-DVD for Windows Vista™	Opt.
	Recovery DVD for Windows Vista™	Opt.
Peripherals	Mouse	Wheel mouse, opt. optical wheel mouse
	Display	Display SCENICVIEW P24-1W (26361-K1043-V150)
	3D-Input Device	SpacePilot (S26381-K412-L100); SpaceTraveller (S26381-K414-L100)
Miscellaneous	Rack infrastructure	Rack mounting-kit (S26361-F2581-L100)
	Medical infrastructure	Medical kit (S26361-F2542-E240)

(1) In configurations with 4 GB and more the visible memory may be reduced to less than 3 GB (depending on system configuration).

(2) 1 GB equals one billion bytes, when referring to hard disk drive capacity; accessible capacity may vary, also depending on used software and tools.

(3) Optional medical kit is mandatory

(4) Some restrictions in combination with Windows XP Professional x64 Edition may apply